

**IN THE UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF TENNESSEE
NASHVILLE DIVISION**

PHILLIP NORTH and DALE NORTH

Plaintiffs,

v.

UNITED STATES OF AMERICA,

Defendant.

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No. _____

COMPLAINT

Plaintiffs, for their complaint against the Defendant, respectfully state as follows:

NATURE OF THE CASE

1. Plaintiffs bring this action seeking just compensation from the United States of America for injuries, losses and damages to Plaintiffs' real and personal property and suffered as a result of the negligence and gross negligence of the United States government and its agencies prior to and during the May 2010 storm event in the Cumberland River Basin. Tragically, there were twenty-six fatalities and an estimate of over \$2 billion in property damages in the Nashville and surrounding areas related to the May 2010 storm event. A similar Pursuant to the Court's Order to Dismiss

2. Plaintiffs are aware that this Court dismissed similar claims of Gaylord and others on February 28, 2013. (Docket No. 3:12-0429 and Docket No. 3:12-0433). Plaintiffs' bring this action to officially assert their claims after the administrative remedies have been exhausted to facilitate the preservation of their claims in anticipation of the appellate review of the Courts dismissal decision.

3. But for Defendant's negligence and gross negligence in the operations of its dams prior to the flooding that occurred beginning on May 2, 2010, the May 2010 storm event would have been an endurable, natural event within the 100-year flood plain along the Nashville Reach of the Cumberland River. Defendant's negligence and gross negligence created a man-made disaster, causing the Cumberland River to rise well above the 100-year flood plain and devastating much of Plaintiffs' real and personal property located along the Nashville Reach of the Cumberland River. Plaintiffs seek just compensation for their losses.

4. Defendant operates federal dam projects located on the Cumberland River upstream from Nashville. The Old Hickory Dam and Reservoir is a hydroelectric power and navigation project, not a flood-control project. Defendant negligently operated Old Hickory Dam prior to and during the May 2010 storm event, failed to create storage capacity in the Old Hickory Reservoir in advance of predicted rainfall and negligently allowed too much headwater to build up behind the dam on Saturday, May 1 before the storm event had caused any flooding along the Cumberland River. As a result of that negligence, Defendant released on May 2 through May 5 massive amounts of water into the Nashville Reach, causing the Cumberland River to surge and causing waters that otherwise would have been contained within the 100-year flood plain and flood way to rise and create a man-made flood above the 100-year flood plain. Defendant then negligently failed to warn of the danger created.

5. The negligent and wrongful acts and omissions of Defendant involve, but are not limited to, the implementation, execution, operation, management, maintenance, procedures, supervision, control, scientific and engineering assessments and related activities of Defendant, and breaches of the various duties of care owed with respect to the Defendant's mismanagement

of water through the Nashville Reach of the Cumberland River that extends from Old Hickory Dam to Cheatham Dam.

6. The negligent and wrongful acts and omissions of Defendant further involve, but are not limited to, the implementation, execution, operation, management, procedures, reporting, supervision, control, scientific and engineering assessments and exchange of scientific data, and related activities and breaches of the various duties of care owed by Defendant with respect to Defendant's preparation and dissemination of information to the Plaintiffs.

7. The negligence and gross negligence of Defendant directly and proximately caused catastrophic destruction, damages, losses and other substantial harm to the real and personal property of Plaintiffs, which Plaintiffs would not otherwise have suffered as a result of the May 2010 storm event.

THE PARTIES

Plaintiffs

8. Plaintiff Phillip North is a Davidson County, Tennessee resident currently residing at 109 Menees Lane, Madison, Tennessee 37115. Phillip North is the owner of the property at 109 Menees Lane, Madison, Tennessee 37115 which is located on the Cumberland River and suffered devastating damages during the May 2010 storm event. Plaintiff sustained damages to his properties as a result of the May 2010 storm event.

9. Plaintiff Dale North is a Davidson County, Tennessee resident currently residing at 109 Menees Lane, Madison, Tennessee 37115. Dale North is the owner of the property at 109 Menees Lane, Madison, Tennessee 37115 which is located on the Cumberland River and suffered devastating damages during the May 2010 storm event. Plaintiff sustained damages to her properties as a result of the May 2010 storm event.

Defendant

10. Defendant United States of America is a sovereign government subject to suit for civil liability in accordance with the Federal Tort Claims Act ("FTCA"), 28 U.S.C. § 2671, *et seq.*, and/or admiralty and maritime laws, and/or the Constitution and Laws of the United States as alleged herein. Defendant is a proper defendant in this lawsuit for damages arising from the alleged negligent or wrongful actions or omissions of the United States Government and its agencies, the United States Corps of Engineers ("Corps") and the National Weather Service ("NWS").

11. The Corps is a division of the United States Government under the direct jurisdiction of the United States Department of the Army.

12. The NWS is a federal agency that is part of the National Oceanic and Atmospheric Administration, which is part of the United States Department of Commerce.

JURISDICTION AND VENUE

13. This Court has subject matter jurisdiction under 28 U.S.C. § 1331 (federal question) and 28 U.S.C. § 1346(b), as a lawsuit brought against the United States government under the FTCA based on the wrongful actions and omissions of employees of the United States and its agencies, including the Corps and the NWS, while those employees were acting within the scope of their office or employment.

14. Plaintiffs previously presented the Corps and the NWS with written administrative claims as required by the FTCA, 28 U.S.C. § 2671, *et seq.* Copies of Plaintiffs' FTCA Claims are attached hereto as **Collective Exhibit A**.

15. Plaintiffs have not yet received a determination of their Claims filed with the Corps and the NWS under the FTCA.

16. Plaintiffs have complied with the provisions of the FTCA and bring this action within the applicable time period, six months having elapsed since the filing of each Plaintiff's administrative claims.

17. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391 and 1402(b) because Defendant is the United States government, Plaintiffs reside in the Middle District of Tennessee, Defendant's negligent and wrongful actions or omissions occurred in whole or in part in the Middle District of Tennessee, and the damages suffered by Plaintiffs occurred within the Middle District of Tennessee.

WAIVER OF SOVEREIGN IMMUNITY

18. The sovereign immunity of Defendant is waived in connection with claims asserted against them in this suit by the enactment of the FTCA.

THE FACTS

The Cumberland River Basin

19. The Cumberland River is a crescent-shaped navigable waterway and tributary of the Ohio River that lies within the states of Kentucky and Tennessee. The Cumberland River generally flows east to west.

20. The Cumberland River flows through the city of Nashville, Tennessee, among other communities, and the portion that flows through Nashville is referred to herein as the "Nashville Reach."

21. Geographically, the city of Nashville sits within the Central Basin and is encircled by a geological formation called the Highland Rim, which rises east of Old Hickory Dam and west of Cheatham Dam.

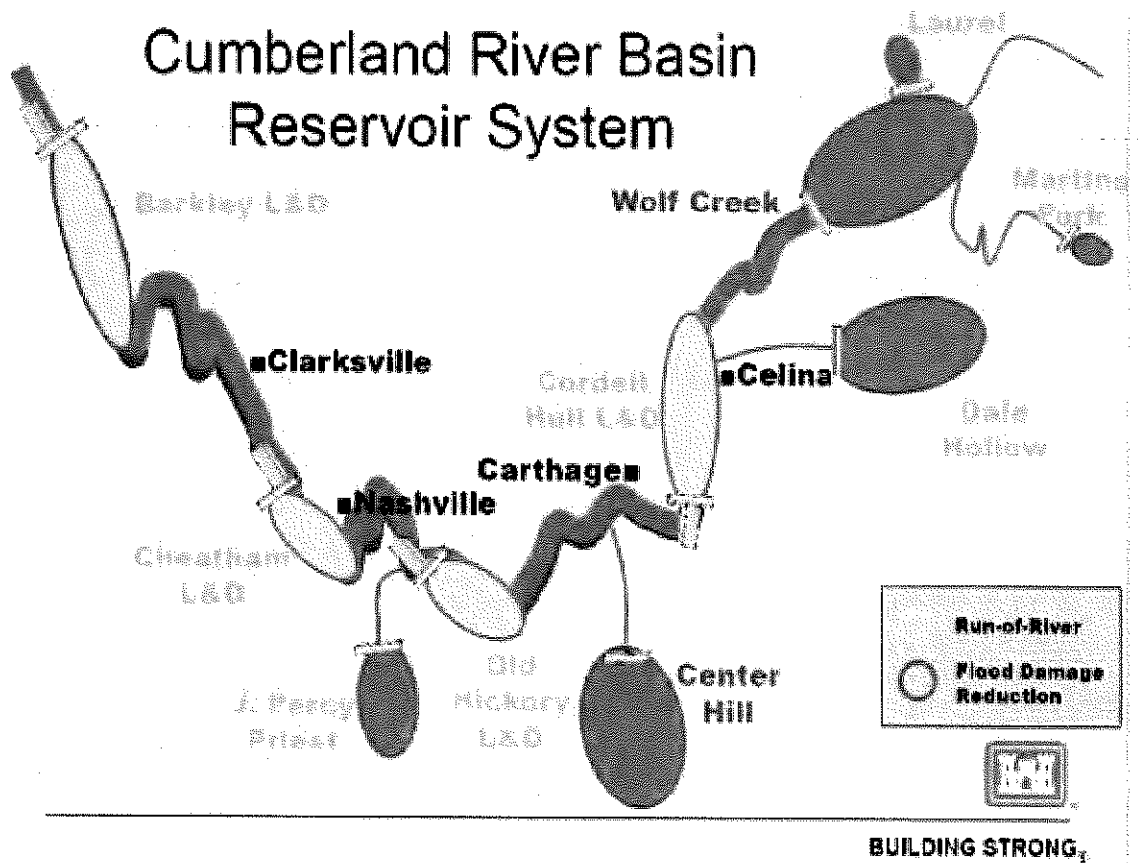
22. The Central Basin is a depression or bowl in the topography of Middle Tennessee, the rim of which is the Highland Rim. The Central Basin forms a watershed, or drainage area, that directs runoff to the center of the Central Basin and into the Nashville Reach of the Cumberland River.

23. More than one (1) million people live within the Central Basin area of the Cumberland River.

The Federal Dam Projects on the Cumberland River

24. Congress authorized and funded ten (10) federal dam projects to be located on the Cumberland River Basin System. The Corps implemented the congressional directives by designing, constructing and operating the dam projects for the purposes specified in the authorizing legislation and project plans.

25. Five (5) of the dam projects are located on the main stem of the Cumberland River and five (5) are located on its tributaries.



26. All five (5) main stem projects on the Cumberland River are congressionally authorized for power generation. These dam projects are designed and engineered by the Corps to impound and control or manipulate the natural flow of the waters of the Cumberland River.

Project	Flood Risk Management	Commercial Navigation	Hydropower	Recreation	Water Quality	Fish & Wildlife
Mainstem Projects						
Wolf Creek Dam	X		X	X	X	X
Cordell Hull Lock & Dam		X	X	X	X	X
Old Hickory Lock & Dam		X	X	X	X	X
Cheatham Lock & Dam		X	X	X	X	X
Barkley Lock & Dam	X	X	X	X	X	X
Tributary Projects						
Martin's Fork Dam	X			X	X	X
Laurel Dam			X	X	X	X
Dale Hollow Dam	X		X	X	X	X
Center Hill Dam	X		X	X	X	X
J. Percy Priest Dam	X		X	X	X	X

27. Old Hickory Lock and Dam is one of the mainstem projects on the Cumberland River authorized by Congress in the River and Harbor Act of 1946, Pub. L. No. 79-525. Old Hickory Dam sits at the eastern end of the Nashville Reach, approximately 24 river miles upstream from Nashville.

28. Old Hickory Dam was congressionally authorized for hydropower and navigation. It was not authorized as a flood-control project and serves no congressionally authorized flood-control purpose.

29. The Corps operates Old Hickory Dam and controls the flow of water through the Dam project and into the Nashville Reach. The Corps manipulates the water level and rate of flow (as measured by cubic feet per second or "cfs") through the Old Hickory Dam generally on an hour-by-hour basis. Old Hickory Dam alters what otherwise would have been the natural flow of the Cumberland River through Nashville.

30. Cheatham Dam is another federal dam project located on the mainstem of the Cumberland River and sits at the western end of the Nashville Reach. The Nashville Reach is, in effect, a man-made lake between Old Hickory Dam and Cheatham Dam, created by the impoundment of those two federal projects.

31. Cheatham Dam was congressionally authorized for hydropower and navigation. It was not authorized as a flood-control project and serves no congressionally authorized flood-control purpose.

32. In designing, constructing, and operating the Cumberland River Basin projects, including Old Hickory Dam, the Corps developed and used basic flood estimates, one of which is called the "standard project flood."

33. The "standard project flood" can be defined as the largest flood that can be expected from the most severe combination of meteorological and hydrological conditions considered to be characteristic of a geographical region.

34. The "standard project flood" is based on the "standard project storm." The "standard project flood" can be defined as a hydrograph representing run-off from the standard project storm.

35. The "standard project storm" is defined as the "estimate for a particular drainage area and season of the year in which snow-melt is not a major consideration and should represent the most severe flood-producing rainfall depth-area-duration relationship and isohyetal pattern of any storm that is considered reasonably characteristic of the region in which the drainage basin is located." The term "storm" is used in a broad sense to mean any period or sequence of rainfall events that may contribute to critical flood events in the particular drainage basin.

36. A "standard project storm" is a foreseeable storm event.

37. On information and belief, Old Hickory Dam is classified as a “high hazard dam,” meaning that the failure or miss-operation of the project probably will cause loss of human life.

The Corps Management and Operations of the Dam Projects

38. The Corps’ management and operation of the federal projects on the Cumberland River are governed by projects’ authorizing legislation, federal statutes and regulations, and Corps’ water control plans and manuals and reservoir instructions for projects mandated by and developed pursuant to 33 C.F.R. § 222.5 (the “Regulations”).

39. The Regulations require the Corps to develop water control plans, water control manuals and instructions for reservoir regulation for reservoirs, locks, dams, reregulation and major control structures and interrelated systems to conform with objectives and specific provisions of authorizing legislation and applicable Corps reports 33 C.F.R. § 222.5(f)(1). “Through analysis and testing studies will be made as necessary to establish the optimum water control plans within prevailing constraints.” *Id.*

40. The Corps has developed a master water control plan, water control manuals and instructions for reservoir regulation for projects on the Cumberland River Basin. The documents specifically govern the Corps’ operation of the projects, including instructions on how to utilize the storage capacity at project reservoirs.

41. The Regulations require that the Corps establish adequate provisions “for the collection, analysis and dissemination of basis data, the formulation of specific project regulation directives, and the performance of project regulation...at field level” 33 C.F.R. § 222.5(f)(5).

42. The Regulations require the Corps to make appropriate provisions “for monitoring project operations, formulating advisories to higher authorities, and disseminating information to others concerned. These actions are required to facilitate proper regulation of systems and to

keep the public fully informed regarding all pertinent water control matters.” 33 C.F.R. § 222.5(f)(6).

43. The Regulations require the Corps to develop “reservoir regulation schedules to assure that controlled releases minimize project impacts and do not jeopardize the safety of persons engaged in activities downstream of the facility. Water control plans will include provisions for issuing adequate warnings or otherwise alerting all affected interests to possible hazards from project regulation activities.” 33 C.F.R. § 222.5(f)(7).

44. The Regulations require that the water plans and manuals “will be revised as necessary to conform with changing requirements resulting from developments in the project area and downstream, improvements in technology, new legislation and other relevant factors” 33 C.F.R. § 222.5(f)(3).

45. The Regulations require the Corps to include in each water control manual “a section on special regulations to be conducted during emergency situations, including droughts. Preplanned operations and coordination are essential to effective relief or assistance.” 33 C.F.R. § 222.5(i)(5).

46. In developing water control plans and instruction manuals, and in making decisions regarding the operations of dam projects, Defendant relies on computer runs of stream-flow synthesis and reservoir regulation that simulate both natural and man-made effects as the primary source of data on which to base the scheduling and control of project operations.

47. For each project on the Cumberland River, the Corps’ manuals and instructions define three horizontal zones or pools in the lake reservoir created behind the dam. From the bottom of the lake to the top, the zones are (1) the inactive pool, (2) the power pool, and (3) the surcharge pool.

48. The inactive pool, or bottom storage zone, offsets lake sedimentation and provides head for hydropower. It also provides depth for slack water navigation, recreation, water intake, habitat for fish and wildlife, and insurance for drought periods.

49. The power pool, or middle storage zone, is the storage capacity of the reservoir used for daily hydropower generation at the project, which is sold to the Tennessee Valley Authority. It is the level of the reservoir during periods of "Normal Regulation," as provided in the Corps' water control manuals and instructions for reservoir regulation.

50. The surcharge pool, or uppermost zone, is the storage capacity of the reservoir that is used to mitigate the effects of the reservoir on downstream river crests. It is intended to store the quantity of water that under natural conditions would have been stored in the former river valley, but which natural storage was lost due to the impoundment from the project. The surcharge pool is used during periods of "Flood Regulation," pursuant to the Corps' water control manuals and instructions for reservoir regulation.

Old Hickory Dam

51. The power pool at Old Hickory Reservoir extends from the elevation of 442 to 445 feet above sea level. There are 63,000 acre feet of storage capacity in the power pool at Old Hickory Reservoir between the elevations of 442 and 445 feet. To enhance recreation, the power pool is maintained in the upper one foot of the power pool, or between the elevations of 444 and 445 feet.

52. The surcharge pool at Old Hickory Reservoir extends from the elevation of 445 to 450 feet above sea level. There are 125,000 acre feet of storage capacity in the surcharge pool at Old Hickory Reservoir between the elevations of 445 and 450 feet. The surcharge pool is

designed to mitigate the natural valley storage area along the Cumberland River lost due to the impoundment from Old Hickory Dam.

53. The Corps' "Old Hickory Dam Instructions for Reservoir Regulation" define three types of regulation of the reservoir: Normal Regulation, Flood Regulation, and Drought Regulation.

54. During periods of "Normal Regulation" at Old Hickory Reservoir, the water level elevation of the reservoir is maintained within the power pool, or between 442 and 445 feet above sea level. The power pool is used to generate hydropower, provide for navigation and enhance recreation.

55. During periods of "Flood Regulation" at Old Hickory Reservoir, pre-flood drawdown to elevation 442 (the power pool level) is permitted upon direction from the USACE's Water Management. Pre-flood drawdown to 442 feet creates 188,000 acre feet of storage capacity in Old Hickory Reservoir.

56. All other operating objectives of the Cumberland River projects, including hydropower, become secondary considerations during periods of "Flood Regulation."

57. The "Flood Regulation" instructions for Old Hickory Reservoir further provide that surcharge pool storage should not be used until "just prior to the peak of the flood to maximize reduction of the peak outflow of the project.....If the flood surcharge storage is used too soon, there could be no storage space remaining when the peak arrives." "Thus, the surcharge storage and any additional storage that can be gained by pre-flood drawdown should be preserved until it is clearly evident that the storm has passed."

58. Accordingly, to utilize the additional storage capacity of Old Hickory Reservoir within the power pool and prevent excessive and potentially damaging discharge, it is necessary

for the Corps to release water through Old Hickory Dam into the Nashville Reach in advance of predicted heavy rainfall. To preserve that storage capacity, it is necessary for the Corps to discharge from Old Hickory Dam at least as much water as is flowing into Old Hickory until just prior to the peak of the flood. Defendant knew that the peak of the flood occurs after the rain stops as it takes time for the runoff to drain from the Central Basin into the Cumberland River.

59. The water control manuals and instructions for Old Hickory Dam and Reservoir provide the following safety mandate: "Maintaining the integrity of the structure under all conditions of stream-flow, and assuring the safety of the general public both at the project and in the river system below the project takes precedence over all functional requirements. The project design and this water control plan are intended to result in safe conditions for all anticipated circumstances. If however, conditions arise where adherence to this plan would jeopardize structural integrity or the general public, safety conditions should prevail."

60. Corps engineering regulations require the creation of an Emergency Action Plan ("EAP") for every Corps operated dam.

61. As described in the engineering regulation, an EAP "is a formal document that identifies potential emergency conditions (either dam failure or large spillway releases) at a dam and specifies preplanned actions to be followed in order to minimize property damage and loss of life."

62. On information and belief, the Corps has an EAP for Old Hickory Dam.

The National Weather Service

63. The NWS develops and publishes NWS products and services, including weather forecasts and warnings and hydrologic forecasts and warnings, including river flows, river stage predictions, and observed river stage levels.

64. The NWS Hydrometeorological Prediction Center ("HPC") provides products and services, including forecast guidance and analysis to support the daily public forecasting activities of the NWS. Through the HPC, the NWS publishes quantitative precipitation forecasts twice each day in the early morning and late afternoon or evening.

65. The NWS has thirteen (13) River Forecast Centers with expertise for hydrologic forecasting. The NWS River Forecast Centers evaluate and use the NWS' quantitative precipitation forecasts to prepare the NWS' river stage forecasts.

66. The NWS River Forecast Centers provide river stage forecast to the NWS local Weather Forecast Offices. The NWS' local Weather Forecast Offices disseminate the river stage forecast to other government agencies and the public. NWS forecasters use the river stage forecasts to issue weather advisories, flood watches, and flood warnings for locations within their areas of responsibility.

Interagency Relationship of the Corps and the National Weather Service

67. The respective duties of the Corps and the NWS are interrelated and complementary, requiring the collection, coordination and exchange of scientific, hydrological and meteorological information and data.

68. In carrying out water control activities, the Regulations require the Corps to "recognize and observe the legal responsibilities of the National Weather Service (NWS) and the National Oceanic Atmospheric Administration (NOAA) for issuing weather forecasts and flood warnings, including river discharges and stages. River forecasts prepared by the Corps of Engineers in the execution of its responsibilities should not be released to the public, unless the NWS is willing to make the release or agrees to such dissemination. However, release to interested parties of factual information on current storms or river conditions and properly

quoted NWS forecast is permissible. District offices are encouraged to provide assistance to communities and individuals regarding the impact of forecasted floods.” 33 C.F.R. § 222.5(f)(8).

69. In recognition of the interrelatedness of the missions and duties of the Corps and the NWS and the need to coordinate and cooperate with each other in the collection and analyses of meteorological and hydrological data and information, the Corps and the NWS entered into a Memorandum of Agreement in 1991. A copy of the 1991 Memorandum of Agreement is attached hereto as **Collective Exhibit B**.

70. The 1991 Agreement requires Corps and NWS to exchange meteorological and hydrological data.

71. The 1991 Agreement requires both the Corps and NWS to make river flow forecasts: “the NWS for dissemination of forecasts to the public and to their Federal, State and local cooperators; and the [Corps] for the management of reservoirs, locks and dams and other water control facilities. Information and ‘real-time data’ exchange is to occur regionally between the Corps’ districts and divisions and the NWS River Forecast Center/Weather Forecast Offices, usually through their respective computer systems.”

72. Both the NWS and the Corps generate river stage forecasts utilizing computer programs that calculate how rainfall inundates the topography of the Cumberland River Basin.

73. The Corps produces daily reports detailing the latest observed and 5-day forecasted releases (outflows) for each dam project it operates on the Cumberland River. The Corps electronically transmits that information and data each day to the NWS.

74. In April and May 2010, the Corps’ daily reports of projected releases from each dam project were based on observed, or actual, rainfall that occurred during the last 24-hour

period, or “rain on ground,” as of 6:00 a.m. each day. The Corps’ daily reports of projected releases did not account for forecasted precipitation for the same day.

75. The NWS uses the daily reports received from the Corps to forecast stream flow and river stages for the Cumberland River.

76. Prior to and at the time of the May 2010 storm event, NWS did not know that the Corps’ daily report was limited to observed or actual rainfall that had occurred during the past 24-hour period, or “rain on the ground,” and that the reports did not include or account for the expected run-off of rain waters from the forecasted precipitation during the next 24-hour period.

77. During major storm events, an intensive interagency effort between the NWS and the Corps is necessary to forecast river stage levels and respond to catastrophic conditions and impacts.

78. During periods of flooding on the Cumberland River system, the Corps Nashville District Water Management is required to “maintain close contact” with the Corps Ohio River Division Water Management, the NWS Ohio River Forecast Center, and the NWS Service Hydrologists to “keep all informed as to flood control strategy.”

The Role of the United States Geological Survey

79. The United States Geological Survey (“USGS”) is a federal agency within the Department of Interior that is responsible for providing reliable scientific data and research. The USGS collects and disseminates hydrological data and information, among other activities, and is a resource for other government agencies. Such hydrological data and information from the USGS is critical to the hydrological forecasts of the NWS (for dissemination of official reports) and Corps (for the management of the Corps reservoirs).

80. During times of flooding, the Water Science Centers of the USGS maintain a comprehensive network of stream and precipitation gages. The USGS has the ability to collect real-time data and gage information.

81. In 1940, the Corps and the USGS established a Cooperative Gaging Program to provide for effective funding, operation and maintenance of gages vital to the Corps' reservoirs and water control management.

82. The Corps Nashville District withdrew from the Cooperative Gaging Program with the USGS approximately five (5) years ago and ended its direct working relationship with the USGS. The Corps contracted with a third party for gage maintenance for the Cumberland River Basin in 2005, which contract expired on April 30, 2010.

83. During the May 2010 storm event, Defendant never contacted the USGS to obtain real-time data and gage information.

The May 2010 Storm Event

84. The Cumberland River Basin experienced heavy rainfall on Saturday, May 1 and Sunday May 2, 2010 with successive rounds of intense rain storm activity.

85. The weather system that brought heavy rainfall to the Cumberland River Basin was predicted for days in advance of the rain that fell on Saturday, May 1 and Sunday, May 2, 2010.

86. The "stage" level of the Cumberland River in Nashville is the elevation of the Nashville Reach. It rises as more water is discharged through Old Hickory Dam.

87. "Major flood stage" for Nashville is established at 45 feet (or approximately 413 feet above sea level at Nashville and almost 3 feet below the 100-year flood plain)

April 24, 2010 – Storms before the May 2010 Storm Event

88. Almost one week prior to the May 2010 storm event, a different weather system moved through the Cumberland River Basin on April 24, 2010 and brought widespread rainfall amounts of 1 to 3 inches. As a result of the discharge of water from the April 24, 2010 rains through the Old Hickory Dam, the river stage level at the downtown Nashville gage of the Cumberland River rose 1.7 feet.

89. The April 24, 2010 rains saturated the ground in the Central Basin of the Cumberland River, increasing soil moisture and stream flows and thereby increasing the likelihood that a subsequent rainfall in the same area would result in significant runoff of rain waters into the mainstream of the Cumberland River.

90. Prior to the May 2010 storm event, the Corps neglected to maintain the spillway gates at Old Hickory in good repair and operating condition. One spillway gate was out of service due to scheduled maintenance, during one of the rainiest months of the year, and one turbine was unavailable due to an unscheduled outage, which prevented their usage during the May 2010 storm event.

April 27-30, 2010 – The Developing Storm System

91. On Tuesday, April 27, 2010, the Corps and the NWS noted that there was a significant rainfall event predicted to begin in the Cumberland River Basin on Friday, April 30 2010.

92. A powerful storm system had moved ashore from the Pacific Northwest and maintained its strength as it continued moving across the Rocky Mountains on Wednesday, April 28 and Thursday, April 29, 2010. The same storm system continued moving into the central

United States on Friday, April 30, 2010. Defendant tracked the development and progress of the storm system as it headed toward Middle Tennessee.

93. On Wednesday, April 28, 2010, the Corps noted the magnitude of the storm system that was headed toward the Cumberland River Basin and began monitoring the storm. The NWS issued a 5-day quantitative precipitation forecast showing a storm system with rainfall of up to 6.2 inches.

94. On Thursday, April 29, 2010, the NWS issued an updated 5-day quantitative precipitation forecast showing a storm system with rainfall up to 6.6 inches and was forecasting “two to three distinct rounds of showers and thunderstorms” over the weekend for the Cumberland River Basin.

95. The Corps lowered the pool elevation of Old Hickory Reservoir by only approximately 0.5 feet on Thursday, April 29, 2010.

96. By Thursday, April 29, 2010, the Corps noted that the “axis of heaviest rainfall at this time is expected from Northern Mississippi through Tennessee into south central Kentucky,” stretching across the Central Basin.

97. The Corps’ Ohio River Division issued a “Flood Potential Update,” via electronic mail, that a significant weather event was forecasted. However, the electronic mail message transmitting this Flood Potential Update was not read by other Corps personnel. The Corps failed to implement a mechanism at the Corps Ohio River Division to activate the staff into emergency mode.

98. On Thursday, April 29, 2010, despite the anticipated and successive rounds of heavy rainfall predicted for Saturday, May 1 and Sunday, May 2, 2010, with a forecast of up to 6.6 inches of rainfall, the Corps continued to operate its “business as usual.” The Corps

continued to implement "Normal Regulations," continued to generate hydropower, and continued to maintain the power pool for navigation and to enhance recreation.

99. By Friday, April 30, 2010, the Corps and the NWS knew that a relatively rare convergence of conditions that was favorable for prolonged intense rainfall in Tennessee was developing. As of April 30, 2010: (i) there was an unseasonably strong late-spring storm system that had been tracking across the United States from west to east as it headed toward Middle Tennessee, (ii) there was a stationary upper air pattern that would concentrate the storm in a relatively defined geographic area, (iii) there was a persistent tropical moisture feed drawing water northward into the storm system from the Gulf of Mexico, and (iv) there were impulses moving through the jet stream consistent with a strong storm system.

100. The four factors described above combined to generate a prolonged rainfall event in the Cumberland River Basin, with the most intense storm activity occurring on Saturday, May 1 and Sunday, May 2, 2010.

101. By the morning of Friday, April 30, 2010, Defendant knew that there was a significant risk that there would be heavy rainfall in the Central Basin watershed areas of the Cumberland River Basin and its management of Old Hickory Reservoir in advance of a massive storm system could either minimize the impact of the incoming rainfall or exacerbate the impact and cause excessive flooding.

102. On Friday, April 30, 2010, the NWS issued a quantitative precipitation forecast showing increased predicted rainfall totals of up to 7 inches with a high rainfall amount of 7.8 inches in Middle Tennessee.

103. The Corps did not lower Old Hickory Reservoir in response to Friday's forecasted rainfall.

104. Despite the increased forecast, Defendant maintained Old Hickory Reservoir in a “business as usual” manner, holding the water level as approximately 444.5 feet, a mere six inches from the top of the power pool in the optimal range for hydropower, navigation and recreation.

105. By Friday, April 30, 2010, the Corps and NWS knew that successive rounds of heavy rains falling in the Central Basin would result in heavy storm runoff into the mainstem of the Cumberland River.

106. Despite Defendant’s knowledge of the forecasted rainfall, the Corps did not implement “Flood Regulation” Instructions or release water through the spillway gates of Old Hickory Dam in order to create and preserve the necessary storage volume prior to the storm. Instead, the Corps continued to operate its “business as usual”. The Corps continued to implement “Normal Regulation,” continued to generate hydropower, and continued to maintain the power pool for navigation and to enhance recreation.

Saturday, May 1, 2010 – Day One of the Storm Event

107. By Saturday morning, May 1, 2010, there was a stalled upper air pattern and frontal boundary of thunderstorm activity, which concentrated the storm system over the Cumberland River Valley.

108. At 4:35 a.m. on Saturday, May 1, 2010, the NWS Hydrometeorological Prediction Center issued a forecast for a record-breaking two-day rainfall event for Middle Tennessee.

109. On Saturday morning, May 1, 2010, as heavy rain began falling, the NWS issued a revised quantitative precipitation forecast increasing the rainfall totals up to 8 to 8.6 inches in Middle Tennessee. The rainfall forecasted that this single storm event was already nearly twice the average monthly rainfall amount for the entire month of April.

110. The Corps did not lower Old Hickory Reservoir in response to Saturday's forecasted rainfall.

111. Rains of more than 8 inches in a 24 to 48-hour period are as rare, a one in 200-year event. Defendant, however, never lowered Old Hickory Reservoir to create more storage capacity after April 29, 2010. Instead, the reservoir steadily rose through the day on Saturday, May 1, 2010, rising through the top of the power pool and into the surcharge pool, well before the second day of the record-breaking two-day storm event.

112. The first round of intense thunderstorms on Saturday, May 1, 2010, produced five to eight inches of rain across central and eastern Tennessee, including the Central Basin of the Cumberland River.

113. Even as the rains fell, the Corps continued to operate Old Hickory Reservoir under Normal Regulation, continued to generate hydropower, and maintained the power pool in the upper one foot area of the power pool, the level used to enhance recreation.

114. Notwithstanding its duty to do so, the Corps did not send any daily reports of projected releases to the NWS on either Saturday, May 1, or Sunday, May 2, 2010, the two most critical days of the storm event.

115. Notwithstanding the fact that the Corps did not send and the NWS did not receive daily reports from the Corps regarding observed and forecasted dam releases on Saturday, May 1, 2010, the NWS issued official river stage forecasts for the Cumberland River, including Nashville, based on the data received the prior day. The NWS ran its river stage forecast models, but used day-old information and data provided by the Corps that the NWS knew was not current as the main input for the NWS forecast models. Moreover, as described above, the data provided by the Corps on which the NWS relied, failed to include expected runoff of rain waters from the precipitation occurring for the remainder of the day on Saturday, May 1, 2010, or the expected rainfall on Sunday, May 2, 2010. As a result, the NWS river stage forecasts for the Cumberland River underestimated the river stage levels and forecasted only minimal rises in the Cumberland River stage levels during the rest of the weekend. The NWS forecasted river stages were substantially below the actual or observed rises in the Cumberland River.

116. On Saturday morning, May 1, 2010, the NWS Ohio River Forecast Center initiated 24-hour staffing based on the magnitude of the storm event. Although certain specified staffing levels were required of NWS during the May 2010 storm event, the NWS failed to have adequately trained staff on-site during the entire storm event.

117. The Corps Nashville District did not initiate similar 24-hour staffing at that time and did not increase its weekend day or evening staffing. In fact, the Corps Nashville District was minimally staffed on Saturday, May 1 and Sunday, May 2, 2010 because those days fell

over a weekend instead of a regular work week, notwithstanding the forecast of a major storm event.

118. On Saturday morning, May 1, 2010, the NWS Ohio River Forecast Center issued its river stage forecast and sent the results of its Meteorological Model-Based Ensemble Forecast System (MMEFS) via electronic mail message to the NWS Nashville Weather Forecast Office and the USACE Nashville District office, stating:

Please take the attached (MMEFS) results seriously. The model trends have been consistent. We are looking at significant potential for Major Flooding. The [NWS Ohio River Forecast Center] will be staffed 24-hrs from now through Monday morning, with increased weekend day and evening staffing as well.

119. Notwithstanding the data and forecasted information received by the Corps on May 1, 2010, and the evident danger to people and property downstream from Old Hickory Dam, the Corps took no action to confirm or deny the accuracy of this dire forecast and did not lower the level of, and create additional storage capacity in, Old Hickory Reservoir.

120. By mid-day on Saturday, May 1, 2010, the NWS issued an "Excessive Rainfall Potential Outlook" and expressed concern about much greater totals for the area noting as follows:

WIDESPREAD STORM TOTAL AMTS IN EXCESS OF 8.0 INCHES ARE LIKELY SOME VERY LOCALIZED AREAS HAVE ALREADY EXCEEDED THAT AND WOULD NOT BE SURPRISED TO SEE STORM TOTAL AMTS APCH AND/OR EXCEEDING 12 – 15 INCHES OVER SOME SPOTS.

121. On Saturday, May 1, 2010, beginning around noon, the Corps finally began increasing discharges from Old Hickory Dam in response to the heavy rains and runoff into the Cumberland River and rising reservoir level behind the dam. The total releases at Old Hickory Dam (consisting of turbine discharges plus spillway gate

releases) increased from 24,300 cfs at noon to 74,500 cfs by midnight on Saturday, May 1, 2010. These releases were still less than the stormwater runoff entering the Old Hickory Reservoir. As a result, the level of Old Hickory Reservoir rose and it lost needed storage capacity even while Defendant was predicting a second round of intense storm activity with a significant potential for major flooding.

122. The Corps did not notify the NWS of these increases in water discharges from Old Hickory Dam.

123. At 1:00 p.m. on Saturday, May 1, 2010, the Corps' Nashville District Commander declared a flood emergency.

124. At 1:40 pm on Saturday, May 1, 2010, the Corps' Water Manager at the Nashville District left the office, only forty minutes after the flood emergency was declared and in the midst of the storm.

125. Corps' Water Management staff came on duty at the Nashville District at 7:00 p.m. and left at 11:00 p.m. Between the time the Water Manager had left at 1:40 p.m. and the Water Management staff returned at 7:00 p.m., the Old Hickory Reservoir had risen by more than one foot. By 11:00 p.m., the Cumberland River at Nashville rose 12 feet.

126. Although it stopped raining for a period of time on Saturday afternoon, May 1, 2010, runoff from Saturday's rains predictably continued to flow into the Old Hickory Reservoir. The volume of inflows into the reservoir exceeded the outflow released through Old Hickory Dam, with the result that the reservoir elevation continued to rise throughout the day and night on Saturday, May 1, 2010.

127. When the Corps finally began increasing the discharges at Old Hickory Dam as the reservoir level rose around noon on May 1, 2010, the Corps had to increase the discharges rapidly because of its delay. The rapid increase caused the observed rises in the level of the Cumberland River at Nashville to “far outpace” the NWS river stage forecasts throughout the afternoon and night on Saturday, May 1, 2010.

128. From Saturday night May 1, 2010 until Sunday morning, May 2, 2010, the NWS Ohio River Forecast Center attempted to contact the Corps Nashville District office several times to obtain updated discharge information and data on the Cumberland River projects. The NWS’ calls went unanswered because the Corps Nashville district office failed and neglected to have personnel on-site throughout the night on Saturday, May 1, 2010, a critical period of time during the May 2010 storm event.

129. As a result of the Corps’ negligent failure to react to the forecasted rain event and to effectively create, preserve and use the storage capacity of Old Hickory Reservoir prior to the start of the May 2010 storm event, as required by the Water Control Manuals and Instructions for Reservoir Regulation, the Corps did not have sufficient storage capacity on Sunday, May 2, 2010 to accommodate the inflows into the Old Hickory Reservoir from the runoff from Saturday’s rainfall and the rainfall forecasted for Sunday in the Cumberland River Basin.

Sunday, May 2, 2010 – Day Two of the Storm Event

130. On Sunday, May 2, 2010, a second round of intense thunderstorms occurred across the same area as the first round and produced additional rainfall of up to 8 inches.

131. By 6:00 a.m. on Sunday, May 2, 2010, and with no overnight water management staff on duty at the Corps Nashville District, the Corps allowed the Old Hickory Reservoir to rise to 447.75 feet above sea level, using almost three feet of storage capacity of the surcharge pool before the second round of heavy rainfall had arrived and well before the peak of the flood that would result from rainfall runoff draining into the Central Basin of the Cumberland River.

132. At 7:15 a.m. on Sunday, May 2, 2010, as the second day of heavy rain begin to fall; the NWS Ohio River Forecast Center contacted the Corps' Ohio River Division to ask for updated project release data and projections for releases at the Cumberland River projects. NWS was told by the Corps Ohio River Division that the Nashville District staff would be in around 7:30 a.m.

133. At around 8:30 a.m. on Sunday, May 2, 2010, after the Corps staff arrived at the Nashville District office, the Corps Ohio River Division facilitated a telephone call between the NWS Ohio River Forecast Center and the Corps Nashville District office.

134. During that conference call, the NWS and the Corps discussed the forecasted rainfall amounts, the current and forecasted water releases from the Cumberland River projects, the results of Defendant's forecast model simulations, and the divergence between two different river stage projections for the Cumberland River.

135. One of Defendant's river stage model simulations, using NWS computer-generated projections of releases from the Old Hickory Dam rather than Corps' daily reports of projected releases from the Old Hickory Dam, projected a river stage of approximately 54 feet for the Cumberland River at Nashville. A river crest stage of 54 feet (about 422 feet above sea level) for the Cumberland River at Nashville equates to a risk of extreme flooding (e.g., the 500-

year stage level is about 421 feet above sea level). A second forecast model simulation that used Corps' daily reports of projected releases from the Old Hickory Dam, however, projected a river stage of approximately 41.9 feet (about 410 feet above sea level at Nashville).

136. The NWS and the Corps discussed these crucial discrepancies in the river stage model simulations during the conference call, but those discrepancies were left unresolved.

137. Notwithstanding Defendant's knowledge that one of its computer forecast models had projected a river crest of 54 feet for the Cumberland River at Nashville that would cause devastating damage, the NWS issued an updated official river stage forecast that was released to the public at 9:39 a.m. on Sunday, May 2, 2010, with a projected river crest of 41.9 feet at 7:00 p.m. for Nashville. The NWS river stage forecast of 41.9 feet was just below "Moderate Flooding" of 42 feet for the Nashville gage and 3.1 feet below the Major Flooding Level of 45 feet.

138. The Defendant knew that a river crest of 54 feet for the Cumberland River at Nashville would pose a serious threat of loss of life and the danger of inordinate property damage.

139. At the time the NWS issued its forecasted river crest of 41.9 feet for Nashville, the second round of heavy rains had begun falling on Sunday morning, May 2, 2010, and the Cumberland River at Nashville was already at 40 feet. Additional heavy rains were predicted during the day on Sunday.

140. At 10:00 a.m. on Sunday, May 2, 2010, the Corps stated that it could maintain discharges from Old Hickory at 100,000 cfs, which would have kept the waters in the Nashville Reach from rising above the 100-year flood plain. The Defendant was wrong.

141. A mere 21 minutes after the NWS released its official forecast of a river crest of 41.9 feet, the Corps again dramatically increased the discharges at Old Hickory Dam because of the rapidly rising reservoir level from the heavy Sunday morning rains. The Corps increased the volume of water released at the Old Hickory Dam from 83,000 cfs to 123,600 cfs by 1:00 p.m.

142. Releasing such massive amounts of water in the Cumberland River through the Old Hickory Dam between 10:00 a.m. and 1:00 p.m., created a surge of water that caused the Cumberland River to rise quickly and far outpace the NWS forecast. In fact, the NWS' forecasted crest of 41.9 feet to occur at 7:00 p.m. on Sunday, May 2, 2010, was already exceeded by 11:30 a.m., less than two hours after the official forecast had been issued.

143. The Corps Nashville District office failed to contact the NWS to inform the NWS of the huge increases in discharges through the Old Hickory Dam, which would have allowed the NWS to revise its forecasted river stage at Nashville and inform the public.

144. At 11:18 a.m. on Sunday, May 2, 2010, the NWS issued a revised forecasted river crest at Nashville of 45.0 feet, or Major Flood Level, to occur at 7:00 p.m. that evening.

145. By noon on Sunday, May 2, 2010, in breach of the Corps' duty to preserve the surcharge pool for the peak of the flood, the surcharge pool became full, even as the second round of heavy rains continued to fall and the runoff from those rains flowed into the Central Basin of the Cumberland River.

146. During the extended and critical period of time on Sunday, May 2, 2010 from 9:50 a.m. to 8:05 p.m., the Corps Nashville District office lost its internet connectivity due to a break in its internet cable. The Corps failed to have adequate emergency, redundant or back up internet communications equipment, systems or plans in place. The Corps Nashville District office lost the ability to communicate crucial data and information timely and effectively with

other Corps offices, the NWS, and others regarding rapidly increasing discharges from Old Hickory Dam.

147. Prior to the storm event, the Corps neglected to train personnel and provide necessary authorizations to use the Corps computer software program for emergency operations, called "ENGLink."

148. At 1:30 p.m. on Sunday, May 2, 2010, the Corps' Ohio River Division facilitated a telephone conference call between NWS Ohio River Forecast Center and the Corps Nashville District office. The Corps Nashville District office advised the NWS that the discharges at Old Hickory would be increased to 130,000 cfs, and possibly up to 140,000 cfs by 2:00 p.m. Inexplicably, the NWS and Corps made no place to increase the frequency of their communications despite the Corps' network outage and the escalating flood emergency.

149. Shortly after the 1:30 p.m. conference call, the Corps began even more aggressive increases in the volume of water discharged from Old Hickory Dam, as often as every 15 minutes. Again, the Corps failed to notify the NWS about these significant increases.

150. By noon on Sunday, May 2, 2010, the Corps had allowed Old Hickory Reservoir to rise to the top of the surcharge pool, robbing the reservoir of any remaining storage capacity well before the peak of the flood and necessitating much larger releases than otherwise would have been necessary.

151. Having failed on Saturday, May 1, 2010, and before to create the storage capacity necessitated by the forecast of more than 8 inches of rain, the Corps had no remaining storage capacity at Old Hickory Reservoir and was left with no choice other than to increase the discharges on Sunday, May 2, 2010 from 130,300 cfs at 2:00 p.m. to an unprecedented 212,260 cfs by 6:00 p.m. Despite the Corps' conclusion only four hours earlier that the discharges at Old

Hickory Dam would not exceed 100,000 cfs, the Corps began releasing much larger volumes of water for which there should have been storage capacity, thereby causing Plaintiffs' damages.

152. Notwithstanding the Corps' dramatic and unprecedented increases in the volume of water being dumped into the Nashville Reach of the Cumberland River, the Corps and NWS both failed to provide updates on the Cumberland River stage forecast for Nashville until 3:37 p.m.

153. By 4:00 p.m. on Sunday, May 2, 2010, with the surge from the greatly increased volumes of water being dumped into the Nashville Reach by the Corps, the Cumberland River exceeded "Major Flood" stage level of 45 feet.

154. At 4:19 p.m. on Sunday, May 2, 2010, the NWS issued an updated forecasted river crest at Nashville of 48 feet (approximately the 100-year flood level of 416 feet above sea level) for Monday, May 3, 2010 at 1:00 a.m.

155. At 4:43 p.m. on Sunday, May 2, 2010, the NWS Weather Forecast Office at Nashville phoned the Corps Nashville District office to ask about updated releases. The Corps gave the NWS erroneous release data of 150,000 cfs, when the actual water release data at that time exceeded 200,000 cfs.

156. At 7:50 p.m. on Sunday, May 2, 2010, the NWS Weather Forecast Office at Nashville again phoned the Corps Nashville District office, and the Corps again provided incorrect discharge data that was based on outdated estimated releases, not actual releases, as of that time.

157. The NWS Weather Forecast Office at Nashville, NWS Ohio River Forecast Center, and forecasters received and used the incorrect discharge data provided by the Corps until around 11:00 p.m. on Sunday, May 2, 2010.

158. As a result of the using erroneous and flawed data, the observed rises in the Cumberland River at Nashville continued to far outpace the NWS' forecasted rises and forecasted river crest of 48.0 feet.

159. Because the Corps failed by Saturday, May 1, 2010, to create and preserve storage capacity, the Reservoir rose to the top of the lock walls by noon on Sunday, May 2, 2010 and Old Hickory Dam was in danger of being overtopped. At that point, and to prevent overtopping of the dam and extensive damages to the dam's powerhouse, the Corps was forced to continually and dramatically increase the discharges at Old Hickory Dam until they reached a peak of 212,260 cfs at 6:00 p.m. on Sunday evening, May 2, 2010.

160. After the rains subsided, the Cumberland River at Nashville crested at 51.86 feet on Monday, May 3, 2010, at approximately 6:00 p.m., inundating the lands all along the Nashville Reach of the Cumberland River.

161. Even with a river crest of 51.86 feet (about 419.6 feet above sea level) at Nashville, the May 2010 storms were foreseeable and within Defendant's "standard project flood" design for the Cumberland River Basin system.

162. Defendant's releases of massive volumes of waters through Old Hickory Dam were necessitated by Defendant's failure to implement on or before Saturday, May 1, 2010 appropriate measures to prepare for the forecasted storm event. As a direct and proximate result of Defendant's negligent acts and omissions, the river stage of the Nashville Reach rose well above the 100-year flood plain, causing extensive damages to Plaintiffs' property.

Defendant's Breaches of Duties

Negligent Operations and Water Management of Old Hickory Dam and Reservoir

163. Having constructed Old Hickory Dam on the Cumberland River, Defendant has a duty to proceed with due care in the management and operation of the Dam and Reservoir.

164. Based upon the predicted path and severity of the storm system leading up to the May 2010 storm event, Defendant knew or should have known that significant amounts of rainfall from the storm system would occur in the Central Basin watershed area, with unchecked tributary flow into the Nashville Reach of the Cumberland River.

165. Defendant knew or should have known that the heavy rainfall in the Central Basin would quickly flow downhill from the Highland Rim to the bottom of the Central Basin and into the Nashville Reach, the area of the Cumberland River with the densest population and highest concentration of buildings and structures.

166. Defendant knew or should have known that in order to protect the people and property downstream from Old Hickory Dam, it needed to create and preserve storage capacity in the Old Hickory Reservoir in advance of the peak of the flood.

167. Defendant knew or should have known that if the storage capacity of the Old Hickory Reservoir was utilized or filled too soon and prior to the peak of the flood, there would not be sufficient storage capacity remaining when the peak water levels were reached.

168. Defendant knew or should have known that the failure to create such storage capacity in Old Hickory Reservoir, followed by sudden and excessive discharges from Old Hickory Dam to prevent overtopping of the Dam, would cause the Nashville Reach of the Cumberland River to rise above the 100-year flood plain endangering lives and inundating Plaintiffs' property, buildings and structures located above the 100-year flood plain.

169. Plaintiffs relied upon Defendant to provide information regarding the flow of the waters of the Cumberland River, including but not limited to, information regarding river stage forecast.

170. Defendant's negligence in failing to control discharges at Old Hickory Dam to maintain the river stage level of the Nashville Reach at or below the 100-year flood plain foreseeably increased the potential for flood damages to Plaintiffs' property.

171. Notwithstanding the Corps' knowledge regarding the operation and management of the Old Hickory Dam and Reservoir, Defendant failed to use due care in the operation and management of the Dam and Reservoir prior to and during the May 2010 storm event.

172. More particularly, Defendant breached its duty to use due care in the operation and management of Old Hickory Dam and Reservoir by, among other things, committing the following acts or omissions constituting negligence:

- (a) continuing to operate Old Hickory Dam and Reservoir under Normal Regulation in advance of and during the May 2010 storm event even despite increasing dire forecasts of the massive storm event;
- (b) failing to implement, adhere to and operate Old Hickory Dam and Reservoir under Flood Regulation in advance of and during the May 2010 storm event despite increasing dire forecasts of the storm event;
- (c) failing to preserve storage capacity and/or draw down and create and preserve storage capacity in Old Hickory Reservoir in advance of the forecasted storm event;
- (d) allowing too much head water to build up behind the Old Hickory Dam in advance of the storm event;

- (e) allowing the head water of Old Hickory Dam to rise to the top of the lock walls prior to the peak of the flood, leaving no option but to suddenly discharge huge volumes of water into the Nashville Reach of the Cumberland River to prevent overtopping of Old Hickory Dam and prevent damage to the powerhouse;
- (f) failing to implement or adhere to Corps regulations, water control plans, water control manuals, and reservoir instructions for the operation of Old Hickory Dam and Reservoir;
- (g) failing to recognize and respond or react to the magnitude of the storm event in advance of and during the storm event;
- (h) failing to provide required information and data to other agencies of Defendant regarding Dam and Reservoir operations and management;
- (i) providing inaccurate data and information and failing to use and exchange proper data and information, and using flawed data and information critical to Defendant's scientific and engineering duties regarding Dam and Reservoir operations and management;
- (j) miscalculating, misapplying and misjudging objective scientific and engineering principles in assessing the hydrological risks, analyzing hydrometeorological variables, determining the Reservoir storage capacity needed and when to create that capacity, determining the inflows into the Reservoir, determining the timing and volume of water that could be safely discharged through Old Hickory Dam;
- (k) failing to contact the USGS and obtain and/or utilize real-time river gage data during the storm event in operating and managing Old Hickory Dam;

- (l) failing to maintain critical internet connectivity during the storm event and the ability to communicate critical data and information with other offices and agencies in a timely and effective manner regarding discharge releases at Old Hickory Dam;
- (m) failing to have adequate, trained staff on duty during the May 2010 storm event;
- (n) failing to have a water manager on duty during all critical periods during the storm event;
- (o) on information and belief, failing to implement or adhere to the Emergency Action Plan for Old Hickory Dam;
- (p) on information and belief, failing to implement or have in place adequate emergency operating policies and procedures, train personnel and provide necessary authorizations to use computer software program for emergency operations;
- (q) failing to maintain the spillway gates at Old Hickory Dam in good repair and operating condition;
- (r) failing to operate Old Hickory Dam safely so as to not create a threat of loss of life or inordinate property damage;
- (s) failing to operate Old Hickory Dam safely so as to not endanger lives and property downstream from the Dam;
- (t) releasing massive volumes of water through the Dam and into the Nashville Reach of the Cumberland River in such a manner as to cause the river to surge and rise rapidly above the 100-year flood plain and endangering lives and property downstream; and
- (u) releasing massive volumes of water in order to protect the Dam structure and powerhouse in disregard of the safety of lives and property downstream.

Negligent Failure to Warn

173. Defendant had a duty of reasonable care to disseminate information to warn Plaintiffs and respond to Plaintiffs' inquiries and requests regarding (i) foreseeable river-stage levels; (ii) projected river-stage levels; (iii) official river-stage and flood stage levels during the May 2010 storm event; and (iv) increases in the releases or volumes of water being discharged through from its federal dam projects.

174. Defendant had a duty of reasonable care to utilize correct and accurate data and information and apply proper scientific principles and engineering judgment in preparing and disseminating river stage forecast information.

175. Defendant failed to warn Plaintiffs and disseminate timely updates to its river stage forecasts, projected river stage levels, and known and observed river stage levels as those levels were reached during the May 2010 storm event, in breach of Defendant's duty of care.

176. Defendant had a duty to warn Plaintiffs of known and foreseeable danger.

177. Defendant failed to warn Plaintiffs of the danger Defendant had created by its operation and management of Old Hickory Dam and Reservoir prior to and during the May 2010 storm event, in breach of its duty of care owed to Plaintiffs. Plaintiffs relied upon Defendant to provide information regarding the flow of the waters of the Cumberland River, including but not limited to, information regarding river stage forecasts.

178. The rapid and massive deluges of water discharged by the Corps at Old Hickory Dam and dumped into the Nashville Reach of the Cumberland River created a man-made, dangerous condition that inundated the Nashville Reach, causing excessive flooding above the 100-year flood plain level and causing devastating damages to Plaintiffs.

179. But for Defendant's negligence and gross negligence in creating a man-made dangerous condition in the Nashville Reach of the Cumberland River, the May 2010 storm event would have been an endurable, natural event within the 100-year flood plain.

180. With adequate warning of these events, Plaintiff could have taken earlier action to evacuate and move property to higher ground that was placed at risk by the Corps' man-made disaster.

181. As a direct and proximate result of the Corps' negligent dumping of unprecedented and massive amounts of water into the Nashville Reach of the mainstem of the Cumberland River, causing a man-made, dangerous condition, Plaintiffs were inundated with water that rose well over the 100-year flood plain causing catastrophic injuries, losses and damages.

Negligent Failure to Exchange Data and Information

182. Defendant's agencies have a duty to exchange complete and accurate meteorological and hydrological data and information.

183. Notwithstanding the Corps' and the NWS' respective missions, duties, undertakings and responsibilities to, among other things, coordinate, cooperate and communicate in the collection, analyses and exchange of meteorological and hydrological data and information, the Corps and the NWS carelessly neglected to do so prior to and during the May 2010 storm event.

184. The Corps failed to provide required daily reports, information and data upon which the NWS relied to prepare official forecasts during the May 2010 storm event.

185. The Corps repeatedly neglected to notify or update the NWS of huge increases in discharges through Old Hickory Dam so as to allow NWS to revise its forecasted river stage at Nashville.

186. The Corps failed to provide the NWS with timely, updated discharge information as that data changed for purposes of the NWS hydrologic forecast modeling. The Corps and NWS failed to increase the frequency of their communications.

187. The Corps repeatedly provided incorrect and inaccurate information to the NWS, including inaccurate and grossly understated project release data, knowing that the NWS relied on that data and information to prepare official forecasts.

188. The Corps' daily reports of release projects for Old Hickory Dam did not include forecasted precipitation amounts.

189. The NWS knowingly used outdated information received from the Corps in preparing its official forecasts.

190. The Corps failed to read and respond timely to an advanced message sent via electronic mail from the Corps Ohio River Division Water Management issuing a "Flood Potential Update" regarding increases in the flood forecast, resulting in slowed internal communications within the Corps chain of command regarding the severity of the storm event.

191. The Corps and the NWS failed to resolve the wide discrepancies in their projected river stage levels and despite that discrepancy, the NWS used Corps forecast data and did not publish its own, more extreme and ultimately more accurate forecast, and as a result, disseminated inaccurate river stage level forecasts.

192. The Corps failed to increase the frequency of communications with the NWS during the May 2010 storm event and failed to answer telephone calls from the NWS seeking updated information.

193. The Corps lost internet connectivity for many hours during an extended and critical period of time on Sunday, May 2, 2010, and its failure to maintain critical lines of communication during the May 2010 storm event disrupted and interfered with the ability of the Corps Nashville District office to timely exchange required and updated data and information.

194. The Corps and the NWS failed to have a comprehensive understanding of each other's operational procedures, forecast processes, and critical data needs during the May 2010 storm event. For example, the NWS did not know or understand that the Corps' daily project release projections, data used by the NWS in preparing official forecasts, was limited to observed rainfall during the past 24-hour period, or "rain on the ground" and failed to include forecasted precipitation amounts in the projected release data.

195. Defendant's careless failure to exchange required data and information timely, maintain adequate communications and communications equipment, seriously disrupted and impacted Defendant's ability to timely and effectively communicate accurate data and information critical to the evaluation and assessment of the hydrological conditions and water management and causally contributed to Plaintiffs' damages.

Plaintiffs' Damages

196. Plaintiffs' property, 109 Menees Lane, Madison TN 37115, is located along the Nashville Reach of the Cumberland River, downstream from Old Hickory Dam and upstream from downtown Nashville. The 20 acre property lies at and above the 100-year flood plain.

197. Plaintiffs' began monitoring official reports from the NWS regarding the Cumberland River's status and projected river stages on Saturday, May 1, 2010. The May 1, 2010 NWS official reports for the Nashville Reach of the Cumberland River never indicated that projected river stage levels were to rise above the 100 year flood plain.

198. Plaintiffs' continued to monitor official reports from the NWS through the day on Sunday, May 2, 2010. On the morning of May 2, 2010, the projected river crest levels were at approximately 398 feet, which is below the 100-year flood plain. Less than a few hours later at 11:00 a.m. on Sunday May 2, 2010, the NWS forecasted river crest predictions had jump 15 feet to a projection 413 feet. By 3:00 p.m. on Sunday May 2, 2010 the river crest projection, increased yet again to 418 feet. Unfortunately this 418 feet project was not issued to the public or provided to Plaintiffs.

199. By mid-day on Sunday, May 2, 2010, and without accurate NWS forecasted river stage levels, Plaintiffs worked frantically to secure and protect their real and personal property from the rising Cumberland River.

200. By the afternoon of May 2, 2010, and still without accurate NWS forecasted river stage levels, Plaintiffs prepared to evacuate their property. The waters continued to rise and by Sunday night, May 2, 2010, the Cumberland River stage levels rose above 422 feet and Plaintiffs were forced to evacuate their property.

201. By the time the Cumberland crested on Monday, May 3, 2010, Plaintiffs' entire 20 acre property was submerged in water. The Cumberland River had not only breached the 100-year flood plain, it had exceeded into the 500-year flood plain. Ariel photographs of Plaintiffs' property following the May 2010 storm event at attached hereto as **Collective Exhibit C**.

202. Plaintiffs' were not able to regain access by land to their property until 5 days later on May 7, 2010. At that point, Plaintiffs' first discovered the extent and magnitude of the damage to their property.

203. Plaintiffs' property that had been underwater was covered with thick mud and silt. The waters of the Cumberland had carried volumes of debris onto Plaintiffs' property. The water damage to Plaintiff's real and personal property was shattering. Many items of Plaintiffs' personal property, including attachments of Plaintiffs' home were heavily damaged or destroyed. Such items include, but are not limited to: the heating and air units, electrical units and wiring, building insulation, farm equipment, yard tractor, fencing, storage shed, stable, front porch, rear patio, paved asphalt driveway, concrete parking area in front of garage, hot tub, inground pool, pool heater and various equipment and pool house. Plaintiffs' barn was also severely damaged and would eventually have to be removed from the property in its entirety. Plaintiffs' estimated damages for the damages to their personal property and home attachments are approximately \$51,000.00.

204. In addition to the Plaintiffs' personal property and home attachments, Plaintiffs' real property endured such water damage that it now requires approximately 700 feet of landscaping and rip rap for erosion control and drainage support to stabilize the river bank which is estimated at \$109,000.00. As a result of the devastating damages to Plaintiffs' property after the May 2010 storm event, the value of Plaintiffs' property has decreased by \$200,000.00.

205. Plaintiffs have made every effort to mitigate their damages following the May 2010 storm event.

206. As a direct and proximate result of Defendant's negligence and/or gross negligence, Plaintiffs suffered extensive damages of approximately 360,000.00 which include

the following: clean-up cost as well as remediation and construction cost, damages and losses of personal property and equipment, barn demolition, damages to real property, rip rap bank stabilization cost, loss of use and enjoyment of property and the diminution in value of real property. Plaintiffs' Real Property Appraisal Report, Rip Rap Bank Stabilization Estimate and other pertinent repair receipts and/or estimates are hereto attached as **Collective Exhibit D**.

CLAIMS FOR RELIEF

Count I – Negligence

207. The allegations set forth hereinabove are realleged and incorporated herein by reference.

208. At all relevant times, Defendant was responsible for the implementation, execution, operation, management, maintenance, procedures, supervision, control, application of scientific and engineering principles, meteorological and hydrological analyses and assessments, exchange of scientific data and river stage forecasting for the Cumberland River projects including the Old Hickory Dam and Reservoir, and dissemination of weather warnings and flood warnings.

209. Defendant owed a duty to Plaintiffs to adhere to, implement and follow the applicable statutes, regulations, water control plans and manuals and reservoir instructions governing the operations and management of the projects located on the Cumberland River.

210. Defendant owed a duty to Plaintiffs to exercise due care with respect to the projects located on the Cumberland River and to refrain from negligent acts or omissions in carrying out those responsibilities.

211. Defendant owed a duty to Plaintiffs to exercise due care regarding meteorological and hydrological conditions, predictions and forecasting during the May 2010 storm event, and

all of the duties described in this complaint and to refrain from negligent acts or omissions in carrying out those responsibilities.

212. Defendant owed a duty to Plaintiffs to use due care in the exercise of its scientific and engineering judgment and professional expertise relating to the meteorological and hydrological conditions presented during the May 2010 storm event and to refrain from negligent acts or omissions in carrying out those responsibilities.

213. At all relevant times, Defendant knew or should have known that its failure to exercise due care in the performance of its duties and, having undertaken those duties, its failure to warn of life-threatening and dangerous conditions could foreseeably result in devastating harm to Plaintiffs. Plaintiffs relied upon Defendants to provide information regarding the flow of the waters of the Cumberland River, including but not limited to, information regarding river stage forecasts.

214. Defendant's conduct, acts and/or failure to act fell below the standard of care owed to Plaintiffs, constituting breaches of those duties.

215. Defendant lacked discretion in undertaking these challenged actions, and/or the challenged actions are not grounded in public policy.

216. Plaintiffs suffered catastrophic injuries and losses to their real property and personal property as a result of the negligent acts and omissions of Defendant.

217. The risk of harm to Plaintiffs and the ensuing harm actually suffered by Plaintiffs was reasonably foreseeable.

218. Each Plaintiff has complied with all conditions precedent to bringing this action.

219. Old Hickory Dam and Cheatham Dam, located on the Cumberland River and operated by the Corps, were authorized, funded and built for power generation and navigation, and not as flood control projects.

220. Defendant's negligent acts and omissions were such that the United States and its agencies, if private persons, would be liable to Plaintiffs in accordance with the laws of the State of Tennessee where the negligent acts and omissions occurred.

221. The injuries and damages suffered by Plaintiffs were caused in fact by Defendant's negligent acts and omissions.

222. The injuries and damages suffered by Plaintiffs were proximately caused by Defendant's negligent acts and omissions.

223. As a foreseeable, direct and proximate cause of Defendant's negligence, Plaintiffs suffered significant damages, including: loss of personal property; damage to real property; diminution in value of real property and personal property; cost of repair; restoration and renovation of real and personal property; cost of lawsuit; and attorneys' fees.

Count II – Gross Negligence

224. The allegations set forth hereinabove are realleged and incorporated herein by reference.

225. At all relevant times, Defendant was responsible for the implementation, execution, operation, management, maintenance, procedures, supervision, control, application of scientific and engineering principles, meteorological and hydrological analyses and assessments, exchange of scientific data and river stage forecasting for the Cumberland River projects, and dissemination of weather warnings and flood warnings.

226. Defendant owed a duty to Plaintiffs to adhere to, implement and follow the applicable statutes, regulations, water control plans and manuals and reservoir instructions governing the operations and management of the projects located on the Cumberland River.

227. Defendants owed a duty to Plaintiffs to exercise due care with respect to the projects located on the Cumberland River and to refrain from negligent acts or omissions in carrying out those responsibilities.

228. Defendant owed a duty to Plaintiffs to exercise due care regarding meteorological and hydrological conditions, predictions and forecasting during the May 2010 storm event, and all the duties described in this complaint and to refrain from negligent acts or omissions in carrying out those responsibilities.

229. Defendant owed a duty to Plaintiffs to use due care in the exercise of its scientific and engineering judgment and professional expertise relating to the meteorological and hydrological conditions presented during the May 2010 storm event and to refrain from negligent acts or omissions in carrying out those responsibilities.

230. At all relevant times, Defendant knew or should have known that its failure to exercise due care in the performance of its duties and, having undertaken those duties, its failure to warn of life-threatening and dangerous conditions could foreseeably result in devastating harm to Plaintiffs. Plaintiff relied upon Defendant to provide information regarding the flow of the waters of the Cumberland River, including but not limited to, information regarding river stage forecast.

231. Defendant's conduct, acts and/or failure to act fell below the duties of care owed to Plaintiffs, constituting breaches of those duties.

232. Defendant's negligent acts or omissions were done with reckless disregard or conscious indifference for the risks of harm to the rights and property of Plaintiffs and, therefore, constitute gross negligence.

233. Defendant lacked discretion in undertaking these challenged actions, and/or the challenged actions are not grounded in public policy.

234. Plaintiffs suffered catastrophic injuries and losses to their real property and personal property as a result of the grossly negligent acts and omissions of Defendant.

235. The risk of harm to Plaintiffs and the ensuing harm actually suffered by Plaintiffs was reasonably foreseeable.

236. Plaintiffs have complied with all conditions precedent to bringing this action.

237. Old Hickory Dam and Cheatham Dam, located on the Cumberland River and operated by the Corps were authorized, funded and built for power generation and navigation, and not as flood control projects.

238. Defendant's grossly negligent acts and omissions were such that the United States and its agencies, if private persons, would be liable to Plaintiffs in accordance with the laws of the State of Tennessee where the negligent acts and omissions occurred.

239. The injuries and damages suffered by Plaintiffs were caused in fact by Defendant's grossly negligent acts and omissions.

240. The injuries and damages suffered by Plaintiffs were proximately caused by Defendant's grossly negligent acts and omissions.

241. As foreseeable, direct and proximate causes of Defendant's gross negligence, Plaintiffs suffered significant damages, including: loss of personal property; damage to real

property; diminution in value of real and personal property; costs of repair, restoration and renovation of real and personal property; costs of this lawsuit and attorneys' fees.

Count III – Trespass

242. The allegations set forth hereinabove are alleged and incorporated herein by reference.

243. The excessive waters accumulated and intentionally discharged through the gates of Old Hickory Dam by the Defendant during the May 2010 storm event physically invaded Plaintiffs' property and land, constituting a trespass.

244. This unauthorized intrusion was a substantial and unreasonable interference with Plaintiffs' exclusive possession of their properties.

245. Defendant's wrongful acts were such that the United States and its agencies, if private persons, would be liable to Plaintiffs in accordance with the laws of the State of Tennessee where the trespass occurred.

246. The trespass caused significant damage, depriving Plaintiffs of the use of their property and resulting in extensive property damage.

247. As a foreseeable, direct and proximate result of this trespass, Plaintiffs suffered significant damages, including: loss of personal property; damage to real property; diminution in value of real and personal property; costs of repair, restoration and renovation of real and personal property; costs of this lawsuit and attorneys' fees.

Count IV – Private Nuisance

248. The allegations set forth hereinabove are alleged and incorporated herein by reference.

249. The excessive waters accumulated and intentionally discharged through the gates of Old Hickory Dam by the Defendant during the May 2010 storm event physically invaded Plaintiffs' property and land, creating and constituting a private nuisance.

250. The discharged waters resulted in a substantial and unreasonable interference with the use and enjoyment of Plaintiffs' land and property. The waters inundated large portions of Plaintiffs' land and property and caused substantial physical and economic damage.

251. The invasion of Plaintiffs' interest in the private use and enjoyment of their land and property was proximately caused by Defendant's storage and intentional discharge of waters through the Old Hickory Dam.

252. Defendant's wrongful acts were such that the United States and its agencies, if private persons, would be liable to Plaintiff in accordance with the laws of the State of Tennessee where the nuisance occurred.

253. As a foreseeable, direct, and proximate result of this private nuisance, Plaintiffs suffered significant damages, including: loss of use and enjoyment of their property; considerable cost in restoring their property to its condition prior to the inundation; inconvenience damages; costs of this lawsuit and attorneys' fees.

RELIEF REQUESTED

WHEREFORE, Plaintiffs respectfully request the entry of judgment against Defendant and that the following relief be granted:

A. Awards of all compensatory and economic damages sustained by Plaintiffs in amounts to be determined at the trial of this cause;

B. Awards of interest as to each Plaintiff to the extent allowed by law;

C. Awards of attorneys' fees and costs of litigation pursuant to the FTCA and/or Equal Access to Justice Act;

D. Awards of discretionary costs; and

E. Such other and further relief as the Court deems just and appropriate.

Respectfully submitted,

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